

Date: Friday, 10/20/2006 11:09:52 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : CLAMP
Job Number : 29085	
Estimate Number : 10192	
P.O. Number : <i>NIA</i>	Part Number : D2171
This Issue : 10/20/2006 S.O. No. : <i>NIA</i>	Drawing Number : D2171 REV. D
Prsht Rev. : NC	Project Number : N/A
First Issue : <i>NIA</i> Type : PURCHASED PARTS	Drawing Revision : D
Previous Run : 27244	Material : <i>NIA</i>
Written By : <i>[Signature]</i>	Due Date : 11/15/2006 Qty: 100 Um: Each
Checked & Approved By : <i>[Signature]</i> 06 10 20	
Comment : Est: F 01.11.29 Reformat SM/EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0

PG

PURCHASING

**Comment:** PURCHASINGIssue P/O: *2299*

Laser cut as per Dwg D2171

Material: 304/316 SS 0.063" thick

Material release note required

Label 10/20 (100)

2.0

D2171F

Clamp



Comment: Qty.: 1.0000 Each(s)/Unit Total : 100.0000 Each(s)
 CLAMP

3.0

PACKAGING 1

PACKAGING RESOURCE #1

**Comment:** PACKAGING RESOURCE #1

Recieve & Inspect for Transit Damage

Ensure Material Release Note is attached

10/6/11/15 (100)

4.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK
 (4.158" center to center)

06-11-17 100 QSA 009

5.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1

**Comment:** SMALL & MEDIUM FAB RESOURCE 1

1- Deburr

2- Bend as per Dwg D2171


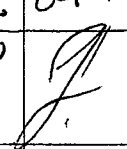
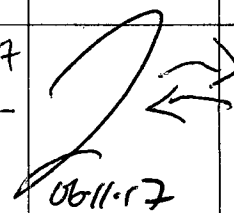
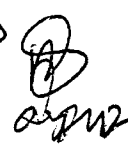
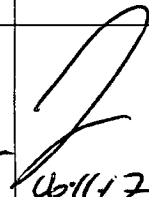
3- Tumble

Mr. 06-11-20

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2171 PAR #: N/A Fault Category: Supplier/GST NCR: (Yes) No DQA: (Yes) Date: 06/11/21
 QA: N/C Closed: (Yes) Date: 06/11/21

NCR: <u>29085</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06-11-17	4.0	Supplier made parts using .063 SS. 301, AMS 5516.		- Potentially supplier, so next time the material will match the drawing. - Material is acceptable as per E-mail.	06/11/17 	 06/11/17		 06/11/17

NOTE: Date & initial all entries

Date: Friday, 10/20/2006 11:09:52 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: CLAMP

Job Number: 29085

Part Number: D2171

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SB

06/11/20 99

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 57219

06/11/20

99

8.0

QC21

FINAL INSPECTION/W/O RELEASE



99

Comment: FINAL INSPECTION/W/O RELEASE

06/11/20

Job Completion



06/11/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

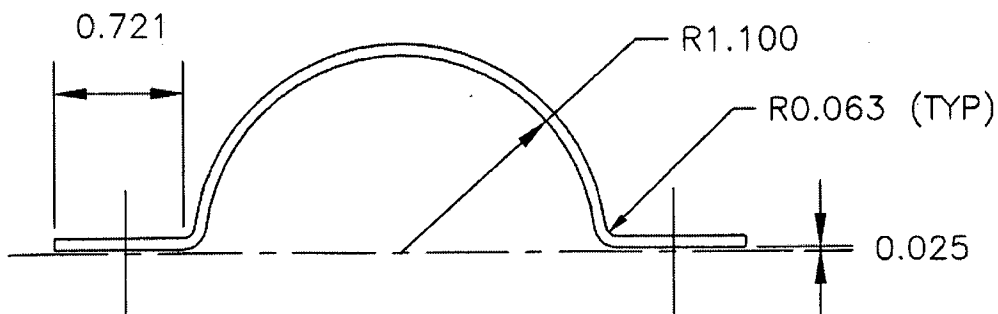
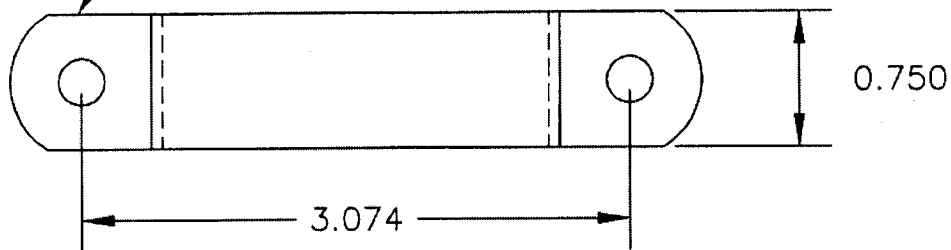
NOTE: Date & initial all entries



DESIGN Bw	DRAWN BY DA	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED KE	DRAWING NO. D2171	REV. 0 SHEET 1 OF 1
DATE 99.03.08		TITLE CLAMP	SCALE 1:1
B	96.01.29	REDRAWN	
C	97.05.14	RADIUS CHANGED, CUSHION ADDED	
D	99.03.08	REMOVE CUSHION (TSR A890) 4.158 WAS 4.888	

RELEASED
99.03.11 KE

PUNCH ENDS PER SPEC
CONTROL DRAWING D2727



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 29085

MATERIAL: 304/316 SS 0.063 THICK
FLAT LENGTH: 4.968 END-END
4.158 HOLE-HOLE



100

CERTIFICATE OF COMPLIANCE
CERTIFICAT DE CONFORMITE



Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE
POINTE CLAIRE, QC
H9R 1A1

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO. 2 OUR JOB NO. J0151142 SHIPPING MEMO 0350224

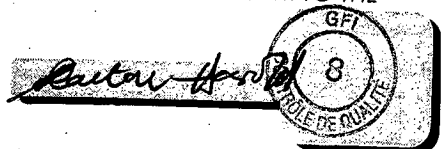
ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
<u>--</u>	<u>100 PCS</u>	<u>PO00002299</u>	<u>D21/1</u>	<u>D</u>	<u>CLAMP</u>	<u>D</u>
MATERIAL		SUPPLIED BY		MAT. REL. NO.		
<u>S.S.T 301</u>		<u>ROLLED ALLOYS / AK STEEL</u>		<u>H/N # 7360176 ATT'D</u>		

	PROCESS	PROCESSOR	RELEASE NOTE #
1	FIRST ARTICLE INSPECTION REPORT ON FILE	GFI	CONFORMS
2			
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE 14 NOVEMBER 2006

G.F.I. Q.C. REP.



528-06



Heat and Corrosion Resistant Alloy Specialists

2283 Argentia Road, Unit 6
Mississauga, Ontario CANADA L5N 5Z2
Phone: 905-363-0277 Fax: 905-363-0283

CERTIFICATE OF COMPLIANCE

Date: AUGUST 9, 2006

Sold to: GFI INC.

Ship to: 180 AVENUE LABROSSE
POINT CLAIRE, QC
H9R 1A1

PO: 60753

Material: .060/.066" THICK SHEET 301 SS 77 lbs.
1 PC 36"x 120"
.063" 302 ANN ✓
MIL S 5059

Heat: 7360176

Spec: AMS 5516
CANADAIR APPROVED SOURCE

This is to certify that the material furnished under the above purchase order meets all the requirements of the specification as specified on your purchase order.

Yours Faithfully,

H. Khan, P. Eng
Q.A. Manager

3/07/2005 11:11

513-860-6350

FERGUSON METALS


PAGE 09/17

REF ID: A60753

		AK Steel Corporation Metallurgical Test Report Coshocton Works Coshocton, OH 43812				Page: 1										
						Load No. 7883163 SYN No. 7883163										
C U S T O M E R	FERGUSON METALS INC. 3475 SYMMES ROAD HAMILTON, OH 42015		S H I P T O	FERGUSON METALS INC FERGUSON METALS INC/AERO METAL PROCESSING DIVISION 3475 SYMMES ROAD HAMILTON, OH 42015		MILL ORDER NO. 271940-0533 PART NO. 11156 ENGLISH UNITS -PRODUCT- METRIC UNITS J62B NOM 36.0000 X COIL		PROCESSOR ORDER NO. 01008517 BUYERS ORDER NO. 01008517								
SKID ID		PIECE	HEAT	PARENT COIL ID		NET WEIGHT										
BKD759479		1	7360176	06361B3-02B		12,970 LBS. 5,883 KG.										
TOTAL SKIDS		TOTAL PIECES				TOTAL NET WEIGHT										
1		1				12,970 LBS. 5,883 KG.										
L-Ladle Analysis of Heat P-Product Analysis of Parent Coil CHEMICAL ANALYSIS																
ID	C	MN	P	S	SI	CR	NI	MO	N	CU						
L 7360176	.012	1.30	.025	.001	.45	18.24	8.61	.32	.037	.35						
SHIPPING DATE: 04/18/2006				REMARKS: THIS MATERIAL WAS MELTED AND MANUFACTURED IN THE U.S.A. NO INTENTIONAL ADDITIONS OF MERCURY OR MERCURY COMPOUNDS, RADIUM, ALPHA SOURCE, AND LOW MELTING ALLOYS OR ELEMENTS CAPABLE OF FORMING LOW MELTING ALLOYS WERE MADE THROUGHOUT THE PROCESSING OF THIS MATERIAL. COILED PRODUCTS CONTAIN NO WELDS MATERIAL MEETS REQUIREMENTS OF TYPES 304 & 304L FOR REFERENCED SPECIFICATIONS												
PRODUCT DESCRIPTION																
CR SHF TYPE 302/304/304L STAINLESS #2B FINISH SLIT EDGE * AMS 5513 H WITH AK STEEL DOCUMENTED EXCEPTIONS DATED 07/11/05 TO PARA GRAPHS * ASTM A 240 -04 EX PARA 3.1.9 ELONG WILL BE DETERMINED BY ASTM B 8 * AMS 5511 H WITH AK STEEL DOCUMENTED EXCEPTIONS DATED D 07/11/05 TO PARAGRAPHS * AMS 5516 H WITH AK STEEL DOCUMENTED EXCEPTIONS DATED 03/30/06 TO PARAGRAPHS-1.2.PRODUCT END USE;2.SPE C. REVIEW AND CERTIFICATION; 3.4 * ASTM A 666 -03 * MILS-5059 D-ANEND-3 * UNS-S30403 9TH EDITION * FMI-304L/304/302 ISSUE 7, 2/ 13/06 * ASME SA-240 SECTION II PART A (2004 ED, 2005 ADDENDA) EX PARA 3.1.7 DIMENSIONAL TOLS FROM ASME SA-480 2004 ED APPLY * ON E-S30400/S30200																
PARENT COIL ID	POS (P/T)	DIR (L, T, D)	COND	% ELONG 1 INCH MEASURED	TENSILE STRENGTH (KSI)	Y.S. .2% OFFSET (KSI)	ROCKWELL HARDNESS Tall	ROCKWELL HARDNESS Front								
06361B3-02B	1	T	A.S.T.M	58.6	83.2	37.6	B 78	B 80								
REVIEWED BY Q.C. Date <u>7/11/06</u> by <u>[Signature]</u>																
*** CONTINUED ON NEXT PAGE ***																

2006 WED 11:37 FAX 905 363 0283 ROLLED ALLOYS --- GFI
 05/07/2006 11:11 513-860-6350
 FERGUSON METALS

PAGE 10/17
 0011/018

		AK Steel Corporation Metallurgical Test Report Coshocton Works Coshocton, OH 43812		Page 2			
		Load No. 7883163 SER No. 7883163					
CUSTOMER	FERGUSON METALS INC 3475 SYMMES ROAD HAMILTON, OH 42015		SUB P T Q	FERGUSON METALS INC FERGUSON METALS INC/AERO METAL PROCESSING DIVISION 3475 SYMMES ROAD HAMILTON, OH 43015		MILL ORDER NO. 271940-0533 PROCESSOR ORDER NO. 01008517 BUYERS ORDER NO. 01008517	
				PART NO. 11136			
				ENGLISH UNITS --PRODUCT-- METRIC UNITS 3620 NOM 36239 X COIL			
PARENT COIL ID	POS (F/T)	ENK (L, T, D)	COND	ASTM A 263 PRACTICE E	GRAIN SIZE ASTM E111	BEND 180 1T	
0686188-01B	T		A.S.T.M.	PASS	8.50	PASS	
0686188-02B	T		A.S.T.M.	PASS	8.50	PASS	

THE CHEMICAL ANALYSIS AND PHYSICAL OR MECHANICAL TESTS REPORTED ABOVE ARE CORRECT AS CONTAINED IN THE RECORDS OF THIS CORPORATION. ALL TESTING IS DONE IN ACCORDANCE WITH ASTM STANDARDS UNLESS OTHERWISE NOTED. AK Steel Corporation 20060604 5:09	THIS CERTIFIED TEST REPORT HAS BEEN DELIVERED TO A CONSIGNEE OF MATERIAL PURCHASED FROM AK Steel Corporation. TO AVOID THE POSSIBILITY OF MISUSE ON DELIVERY OF THE REPORT TO A THIRD PARTY IT MUST BE RECEIVED BY AND BEAR THE NAME OF SUCH CONSIGNEE. SIGNED <u>Steve Raymond</u> DATE <u>06/12/2006</u> TIME <u>2:18 PM</u> APPLICATION ENGINEER
--	---

FERGUSON METALS, INC.
 This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following.
 Hamilton, OH 4501
 3475 Symmes Road
 12A Trowbridge Drive
 Bethel, CT 0686

Customer: G.F.I. INC.
 P.O.: T24965KK
 Sales: 01083756
 QTY: 1

Customer: G.F.I. INC.
 Heat: 7360176
 Shipped: 06/09/06

Authorized Signature

 Lynne Harper

Jason Murdoch

From: David Shepherd [dshepherd@dartaero.com]
Sent: Thursday, November 16, 2006 6:04 PM
To: 'Jason Murdoch'
Cc: 'L Lacelle'
Subject: RE: D2171 clamps

For the D2171 clamps, it is acceptable to use AISI 301 SS 0.063" thick per MIL S 5059.

David

From: Jason Murdoch [mailto:jmurdoch@dartaero.com]
Sent: Thursday, November 16, 2006 5:17 AM
To: 'David Shepherd'
Cc: 'L Lacelle'
Subject: D2171 clamps

Good morning Dave. I received some clamps this morning and on the supplier certs, they state that the material used was .063 S.S. 301; MIL S 5059; and also is Canadair approved spec for AMS 5516. I'm not sure if this is acceptable because I can't find it as an equivalent material.

jmurdoch@dartaero.com
Q.C. COORDINATOR

--
No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.409 / Virus Database: 268.14.6/535 - Release Date: 11/15/2006

--
No virus found in this outgoing message.
Checked by AVG Free Edition.
Version: 7.1.409 / Virus Database: 268.14.6/536 - Release Date: 11/16/2006

11/17/2006